

Effective Strategies for Increasing Citation Frequency

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Abstract

Due to the effect of citation impact on The Higher Education (THE) world university ranking system, most of the researchers are looking for some helpful techniques to increase their citation record. This paper by reviewing the relevant articles extracts 33 different ways for increasing the citations possibilities. The results show that the article visibility has tended to receive more download and citations. This is probably the first study to collect over 30 different ways to improve the citation record. Further study is needed to explore and expand these techniques in specific fields of study in order to make the results more precisely.

Keywords: university ranking, improve citation, citation frequency, research impact, open access, h-index

1. Introduction

The research output is an essential part of an institution's measure and evaluation of research quality. Previously, the number of publication and journal impact factors were the means to derive research ratings. Recent approach for rating research quality rely on the number of citations per article. Citation shows that how many times an article has been cited by other articles (Fooladi et al. 2013). Citations to research publications are a quality indicator, important for both the author and the affiliated university (Jones and Evans 2013). Most researchers are evaluated based upon their publications as well as the numbers of citations their publications receive. One of the key ways to increase citations is to expose the research output to the widest possible audience. If people are unaware of the research, they won't be citing it. The more researchers and students in other fields who have heard about the research, the researcher will receive more citations. Citations to an article might strongly depend on the visibility, rather than the merit of the article (Marashi et al. 2013). Ale Ebrahim (2012) argues that publishing a high quality paper in scientific journals will be a halfway of receiving citation in the future. The rest of the way is advertising and disseminating the publications by using the proper "Research Tools". Post-print publishing means to make peer-reviewed, published research articles freely available to anyone with an internet connection, often greatly increases the citation frequency of articles (LiU E-Press 2007). The following section introduces 33 ways which may help the researchers to improve the number of their citations.

2. 33 Ways for Improving Citations

1. Use A Unique Name Consistently Throughout Academic Careers

Authors are highly advised to use the same variation of their name consistently throughout their academic careers. If the name is a common name, consider adding your full middle name to distinguish it from other authors. Consistency enhances retrieval (Sarli and Holmes 2011).

2. Use a standardized institutional affiliation and address, using no abbreviations (Sarli and Holmes 2011).

Standardization of author affiliation is important to make sure work can be attributed to the correct author and institution (Jones and Evans 2013). Providing accurate contact details are essential so that researchers can contact directly for queries, further information and discussions about the publication (Wong 2008).

3. Repeat key phrases in the abstract while writing naturally.

Make some key phrases of your study and repeat them in the abstract page of your paper. Since search engines and citation trackers search the abstract of your article, the normal repetition of key words increases the chance of your paper to be retrieved more easily (Sarli and Holmes, 2011; Jones and Evans, 2013).

4. Assign keyword terms to the manuscript (Sarli and Holmes 2011).

Using keywords is a vital part of abstract writing, because of the practice of retrieving information electronically: keywords act as the search term. Use keywords that are specific, and that reflect what is essential about the paper. Put yourself in the position of someone researching in your field: what would you look for? Consider also whether you can use any of the current "buzzwords" (Emerald Guide 2012).

5. Make a unique phrase that reflects author's research interest and use it throughout academic life.

Add the name of study in the title of all publications and use the same title/ name consistently (Sarli and Holmes 2011).

6. Publish in journal with high impact factor (Vanclay 2013).

The most effective strategy to increase citation rates is publishing in a journal with higher impact factor (Vanclay 2013). Dhawan and Gupta (2005) studied 1101 papers and found that articles published in high impact factor journals increase the probability of getting cited.

7. Self-archive articles.

Free online availability increases a paper's impact (Lawrence 2001); therefore, maximize the visibility of your research by making copies of your articles available online (Jones and Evans 2013). Gargouri et al. (2010) have made a strong and a declarative link between self-archiving and increased citation performance.

8. Keep your professional web pages and published lists up to date (Jones and Evans 2013).

The advantage of self-archive on the web and make a link between published lists is obvious. Freely accessible articles increase citations by 50% or more (Harnad 2006).

9. Make your research easy to find, especially for online searchers (Jones and Evans 2013).

Jamali and Nikzad (2011) investigated 2172 articles and found that there is a positive relationship between the number of downloads and citations. Research shows that there is a correlation between highly cited articles and the likelihood of it being online (Vaughan and Shaw 2003).

10. Open Access (OA) increases citation rate (MacCallum and Parthasarathy 2006).

Free access increases citation rates, searching online is more efficient and following hyperlinks quickly leads researchers to their prevailing opinion (Evans 2008). Open Access has a positive impact on growth of citations (Table 1) (Swan 2010).

11. Deposit paper in Open Access repository (Frost 2009).

For example, Ray Frost is a chemist who publishes prolifically. About three years ago, he began depositing his articles in the Queensland University of Technology (QUT) repository. So far, he has deposited over 300 of his articles. Figure 1 (derived data from the Web of Science) shows the patterns of publication and citations to those publications. When Ray started putting his articles into the QUT repository, the numbers of citations began to take off. The latest count is 1200 in one year. Even though Ray's publication rate went up a bit over this period, the increase in citations is impressive (Frost 2009).

Table 1. Effect of Open Access (OA) to increase the level of citations (Swan 2010)

Size of OA citation advantage when found (and where explicitly stated by discipline)	% increase in citations with Open Access
Physics/astronomy	170 to 580
Mathematics	35 to 91
Biology	-5 to 36
Electrical engineering	51
Computer science	157
Political science	86
Philosophy	45
Medicine	300 to 450
Communication studies (IT)	200
Agricultural sciences	200 to 600

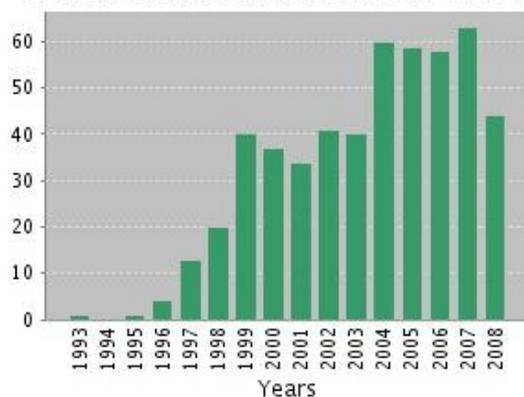
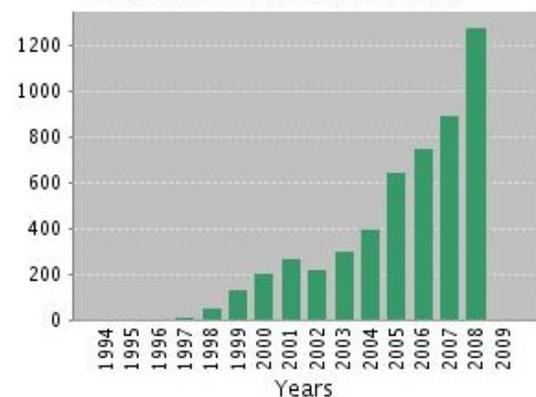
Published Items in Each Year**Citations in Each Year**

Figure 1. The patterns of citations to Ray Frost's articles that are deposited in the Queensland University of Technology (QUT) repository (Frost 2009)

12. Publish with international authors (Pislyakov and Shukshina 2012)

Citation analysis shows that papers with international co-authors are cited up to four times more often than those without international co-authors (Jones and Evans 2013). Krause (2009) argued that articles published with multi-countries or multi-institutes collaborations get cited more. Authors who are often involved in international collaboration received more citations (Aksnes 2003).

13. Team-authored articles get cited more (Krause 2009)

Wuchty et al. (2007) have used 19.9 million papers over 50 years and demonstrated that team-authored articles typically produce more frequently cited research than individuals. A recent study by Cotropia and Petherbridge (2013) in law review articles which were published within two decades also demonstrated that team research is on average more frequently cited than individual research. Typically high cited articles are authored by a large number of scientists (Aksnes 2003).

14. Use more references

There is a ridiculously strong relationship between the number of citations a paper receives and the number of its references (Corbyn 2010).

15. Publish a longer paper

A longer paper gathers more citations (Ball 2008; Abt 1998). Hamrick et al. (2010) indicated that longer papers are associated with more citations.

16. Publish papers with a Nobel laureates (Ball 2011)

Some landmark papers of Nobel laureates quite quickly give their authors a sudden boost in citation rate and this boost extends to the author's earlier papers too, even if they were in unrelated areas (Ball 2011).

17. Contribute to Wikipedia (SAGE 2012)

Try to contribute in Wikipedia. As a good example, one paper (Nader Ale Ebrahim et al. 2009) that was used as a reference in defining virtual teams in Wikipedia has received significant citations in comparison to the rest of the articles from the same author.

18. Start blogging (SAGE 2012)

Use blogs and podcasts to leverage on-going researcher discussion on the Internet (Taylor & Francis Group 2012a). Web 2.0 tools such as wikis and blogs can be created to inform, describe and link people's research interests and publications (Wong 2008). Authors are encouraged to promote their papers through the addition of links which web search engines such as Google take particular notice for their page ranks (Smith 2005).

19. Join academic social networking sites (Taylor & Francis Group 2012b)

Increasing the availability of articles through social networking sites broadens dissemination, increases use, and enhances professional visibility which lead to increased citations and usage. Academia is an online social reference tool that allows reference sharing among academics and researchers. Alternatively, researchers may use Citeulike to share their interests in research publications (Wong 2008). Academia, Citeulike, ResearchGate and LinkedIn are just a few examples of knowledge sharing tools to make others aware of research articles that may be of relevance to authors and hence get cited.

20. Write a review paper

Reviews are more likely to be cited than original research papers. Some types of articles including editorials, letters to editors, news items, meeting abstracts, and case studies are generally poorly cited (Taylor & Francis Group 2012a). Authors seeking to be well cited should aim to write comprehensive and substantial review articles, and submit them to journals with a high impact factor that carry previous articles on the topic (Vanclay 2013).

21. Papers published after having first been rejected elsewhere receive significantly more citations (Ball 2012)

Submission history affected post-publication impact, resubmissions from other journals received significantly more citations than first-intent submissions (Calcagno et al. 2012).

22. Papers with a larger number of "callouts" be likely to receive a higher number of citations (Hamrick et al. 2010)

A "callout" is a phrase or sentence from the paper that is displayed in a different font, somewhere in the paper. Generally, callouts are inserted by the editorial staff to call attention to potentially interesting aspects of a paper (Hamrick et al. 2010).

23. Avoid to select a question type of title

Jamali and Nikzad (2011) investigated 2172 articles and found different types of title effects on the number of downloads and citations. Especially articles with question type titles tend to be downloaded more but cited less than the others.

24. Sharing detailed research data

Open data (Publicly-available datasets) are significantly associated with a 69% increase in citations to articles that accompany the data. This correlation is independent of Journal Impact Factor, country of authors and time since publication (Piwowar et al. 2007; Swan 2010).

25. Publish across disciplines

Publishing across disciplines has been found to increase citation e.g. chemistry, biological science and physics (Ortega and Antell 2006).

26. Present a working paper (Taylor & Francis Group 2012a)

Try to go to a prestigious conference and present some parts of your research or publish working paper. Working papers are freely available before and after the articles are published. Researchers may upload their working papers into open access repositories including the personal websites or more formal repositories such as arXiv and SSRN (McCabe 2011).

27. Publish your article in one of the journals everyone in your discipline reads (Taylor & Francis Group 2012a)

Choosing a journal that matches with a researcher's field of study is thus very important because it makes it more likely that the article receives more citation. A journal which covers a broad range of disciplines may be the best.

28. Publicize yourself - link your latest published article to your email signature (Taylor & Francis Group 2012a)

A great way to spread researchers' outputs and get extra attention of email recipient is to add a link to the latest publication. This little section of contact information that most people ignore, provides a good platform for publication marketing.

29. Publish your work in a journal with the highest number of abstracting and indexing (Nader Ale Ebrahim 2012)

Abstracting and indexing services generate visibility for the material published in most journals (Garfield and Merton 1979). Citation potential increases by attributing to the high visibility of scientific materials. Therefore, a journal with the highest number of abstracting and indexing in different databases can be a good target.

30. Create a podcast describing the research project

Research is not just text and figures. Create a podcast describing the research project and submit the podcast to YouTube or Vimeo (Sarli and Holmes 2011). Podcasts can describe the research efforts. Video is an increasingly important way for researchers to communicate their results and welcome submissions of podcasts from authors and editors (Sarli and Holmes 2011).

31. Make an online CV Like ORCID or ResearcherID

Online CV makes a link between the list of published papers and open access versions of relevant articles (Sahu 2005). Online CV increases researchers' output visibility to the academic community.

32. Publish tutorials papers

Tutorial paper is "a paper that organizes and introduces work in the field. A tutorial paper assumes its audience is inexpert; it emphasizes the basic concepts of the field and provides concrete examples that embody these concepts (ACM 2013)". Tutorials papers tend to have a higher number of citations (Hamrick et al. 2010).

and finally;

33. Use all "Enhancing Visibility and Impact" tools which are available on <http://www.mindmeister.com/39583892/research-tools-by-nader-ale-ebrahim>

Familiarity with academic advertisement tools allows the researcher to increase his/her h-index in the short time. H-index shows the academicians' influences in the specified field of research (Aghaei Chadegani et al. 2013). Therefore, a person with higher levels of h-index has higher quality publications with high amount of citations (Nader Ale Ebrahim 2012). The advertisement section of the above mind map includes the tools which can assist the researchers to disseminate and increase visibility of their published papers.

3. Conclusion

Publishing research output in high-impact journals is a primary concern of the researchers. The researchers also need to consider different ways to receive more citations after publishing a paper. When their works are published, they are concerned about citation which is directly related to the paper's quality and visibility. The researchers cannot increase the quality of their published papers; therefore, they can apply some of these 33 key points to increase the visibility of their published papers.

References

- Abt, H. A. (1998). Why some papers have long citation lifetimes. [10.1038/27355]. *Nature*, 395(6704), 756-757. <http://dx.doi.org/10.1038/27355>
- ACM. (2013). *ACM Computing Surveys*. Retrieved May 30, 2013, from http://csur.acm.org/author_info.html
- Aghaei Chadegani, A., Salehi, H., Yunus, M. M., Farhadi, H., Fooladi, M., & Farhadi, M., et al. (2013). A Comparison between Two Main Academic Literature Collections: Web of Science and Scopus Databases. *Asian Social Science*, 9(5), 18-26. <http://dx.doi.org/10.5539/ass.v9n5p18>
- Aksnes, D. W. (2003). Characteristics of highly cited papers. *Research Evaluation*, 12(3), 159-170. <http://dx.doi.org/10.3152/147154403781776645>
- Ale Ebrahim, N. (2012). Publication Marketing Tools "Enhancing Research Visibility and Improving Citations". *Research Tools in Education Series*, 1(2), 1-86.

- Ale Ebrahim, N., Ahmed, S., & Taha, Z. (2009). Virtual R & D teams in small and medium enterprises: A literature review. [Review]. *Scientific Research and Essay*, 4(13), 1575–1590.
- Ball, P. (2008). A longer paper gathers more citations. *Nature*, 455(7211), 274-275. <http://dx.doi.org/10.1038/455274a>
- Are scientific reputations boosted artificially? (2011, 6 May). *Nature*.
- Ball, P. (2012, 11 October). Rejection improves eventual impact of manuscripts. *Nature*.
- Calcagno, V., Demoinet, E., Gollner, K., Guidi, L., Ruths, D., & de Mazancourt, C. (2012). Flows of Research Manuscripts Among Scientific Journals Reveal Hidden Submission Patterns. *Science*, 338(6110), 1065-1069. <http://dx.doi.org/10.1126/science.1227833>
- Corbyn, Z. (2010). An easy way to boost a paper's citations. *Nature*. <http://dx.doi.org/10.1038/news.2010.406>
- Cotropia, C. A., & Petherbridge, L. (2013). The Dominance of Teams in the Production of Legal Knowledge. *Loyola-LA Legal Studies*.
- Dhawan, S., & Gupta, B. (2005). Evaluation of Indian physics research on journal impact factor and citations count: A comparative study. *DESIDOC Journal of Library & Information Technology*, 25(3), 3-7.
- Emerald Guide. (2012). *How to... write an abstract*. Retrieved May 9, 2013, from <http://www.emeraldinsight.com/authors/guides/write/abstracts.htm?part=1>
- Evans, J. A. (2008). Electronic Publication and the Narrowing of Science and Scholarship. *Science*, 321(5887), 395-399. <http://dx.doi.org/10.1126/science.1150473>
- Fooladi, M., Salehi, H., Yunus, M. M., Farhadi, M., Aghaei Chadegani, A., & Farhadi, H., et al. (2013). Do Criticisms Overcome the Praises of Journal Impact Factor? *Asian Social Science*, 9(5), 176-182, <http://dx.doi.org/10.5539/ass.v9n5p176>
- Frost, R. (2009). *Case study: Open Access visibility and impact of an individual researcher*. Retrieved May 9, 2013, from http://www.openscholarship.org/jcms/c_6220/case-study-open-access-visibility-and-impact-of-an-individual-researcher
- Garfield, E., & Merton, R. K. (1979). Perspective on Citation Analysis of Scientists. In *Citation indexing: Its theory and application in science, technology, and humanities* (Vol. 8). Wiley New York.
- Gargouri, Y., Hajjem, C., Larivière, V., Gingras, Y., Carr, L., & Brody, T., et al. (2010). Self-Selected or Mandated, Open Access Increases Citation Impact for Higher Quality Research. *PLoS ONE*, 5(10), e13636. <http://dx.doi.org/10.1371/journal.pone.0013636>
- Hamrick, T. A., Fricker, R. D., & Brown, G. G. (2010). Assessing What Distinguishes Highly Cited from Less-Cited Papers Published in Interfaces. *Interfaces*, 40(6), 454-464. <http://dx.doi.org/10.1287/inte.1100.0527>
- Harnad, S. (2006). Publish or perish—self-archive to flourish: The green route to open access. *ERICIM News*, 64.
- Jamali, H. R., & Nikzad, M. (2011). Article title type and its relation with the number of downloads and citations. *Scientometrics*, 88(2), 653-661. <http://dx.doi.org/10.1007/s11192-011-0412-z>
- Jones, K., & Evans, K. (2013). Good Practices for Improving Citations to your Published Work (p. 2). University of BATH.
- Krause, K. (2009). Increasing your Article's Citation Rates. *Open Access Week*.
- Lawrence, S. (2001). Free online availability substantially increases a paper's impact. [10.1038/35079151]. *Nature*, 411(6837), 521-521.
- LiU E-Press. (2007). *One way to increase citation frequency*. Retrieved May 9, 2013, from <http://www.ep.liu.se/authorinf/postpubl.en.asp>
- MacCallum, C. J., & Parthasarathy, H. (2006). Open Access Increases Citation Rate. *PLoS Biol*, 4(5), e176, <http://dx.doi.org/10.1371/journal.pbio.0040176>
- Marashi, S.-A., Seyed Mohammad Amin, H.-N., Alishah, K., Hadi, M., Karimi, A., & Hosseini, S., et al. (2013). Impact of Wikipedia on citation trends. *EXCLI Journal*, 12, 15-19. <http://dx.doi.org/citeulike-article-id:12202824>

- McCabe, M. J. (2011). Online Access and the Scientific Journal Market: An Economist's Perspective. (Vol. Draft Report for the National Academy of Sciences, pp. 1-36). University of Michigan and SKEMA Business School.
- Ortega, L., & Antell, K. (2006). Tracking Cross-Disciplinary Information Use by Author Affiliation: Demonstration of a Method. *College & Research Libraries*, 67(5), 446-462.
- Pislyakov, V., & Shukshina, E. (2012). *Measuring Excellence in Russia: Highly Cited Papers, Leading Institutions, Patterns of National and International Collaboration*. Paper presented at the Proceedings of STI 2012, Montréal.
- Piwovar, H. A., Day, R. S., & Fridsma, D. B. (2007). Sharing Detailed Research Data Is Associated with Increased Citation Rate. *PLoS ONE*, 2(3), 308. <http://dx.doi.org/10.1371/journal.pone.0000308>
- SAGE (2012). 10 Ways to Increase Usage and Citation of your Published Article Using Social Media. Retrieved May 9, 2013, from <http://www.sagepub.com/authors/journal/10ways.sp>
- Sahu, D. (2005). Open Access: Why India Should Brace it? In (pp. 1-49).
- Sarli, C., & Holmes, K. (2011). *Strategies for Enhancing the Impact of Research*. Retrieved May 9, 2013, from <https://becker.wustl.edu/impact-assessment/strategies>
- Smith, A. G. (2005). Citations and Links as a Measure of Effectiveness of Online LIS Journals. *IFLA Journal*, 31(1), 76-84. <http://dx.doi.org/10.1177/0340035205052651>
- Swan, A. (2010). The Open Access citation advantage: Studies and results to date.
- Taylor & Francis Group (2012a). *Optimize citations*. Retrieved May 9, 2013, from <http://journalauthors.tandf.co.uk/beyondpublication/optimizingcitations.asp>
- Taylor & Francis Group (2012b). *Promote your article*. Retrieved May 9, 2013, from <http://journalauthors.tandf.co.uk/beyondpublication/promotearticle.asp>
- Vanclay, J. K. (2013). Factors affecting citation rates in environmental science. *Journal of Informetrics*, 7(2), 265-271. <http://dx.doi.org/10.1016/j.joi.2012.11.009>
- Vaughan, L., & Shaw, D. (2003). Bibliographic and Web citations: What is the difference? *Journal of the American Society for Information Science and Technology*, 54(14), 1313-1322. <http://dx.doi.org/10.1002/asi.10338>
- Wong, R. (2008). *Ways to Maximise Citations for Researchers* (pp. 1-7). University of Sheffield.
- Wuchty, S., Jones, B. F., & Uzzi, B. (2007). The Increasing Dominance of Teams in Production of Knowledge. *Science*, 316(5827), 1036-1039. <http://dx.doi.org/10.1126/science.1136099>

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